

**Appendix B**   Photos

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**West Cucamonga Creek**

**Direction:** Facing north



**Cucamonga Creek**



**Lower Deer Creek Channel**

**Direction:** Facing north on East Airport Drive



### Cal Commerce Center Storm Drain

**Direction:** Facing west on I-10 just east of Milliken Avenue offramp



**East Etiwanda Creek**

**Direction:** Looking south



**San Sevaine Channel**

**Direction:** Looking south



**I-10 Channel**

**Direction:** Looking west. I-10 Channel right side of freeway



**Colton Southwest Storm Drain**

**Direction:** At J Street Looking east towards Pennsylvania Ave. (5<sup>th</sup> St.)



**11<sup>th</sup> Street Storm Drain**

**Direction:** Eastbound I-10 looking south



Warm (Lytle) Creek

**Direction:** Looking north



**Santa Ana River**

**Direction:** Looking north



**San Timoteo Creek**

**Direction:** Looking upstream channel



**Mission Zanja**

**Direction:** Looking north



**The Zanja**

**Direction:** Looking south

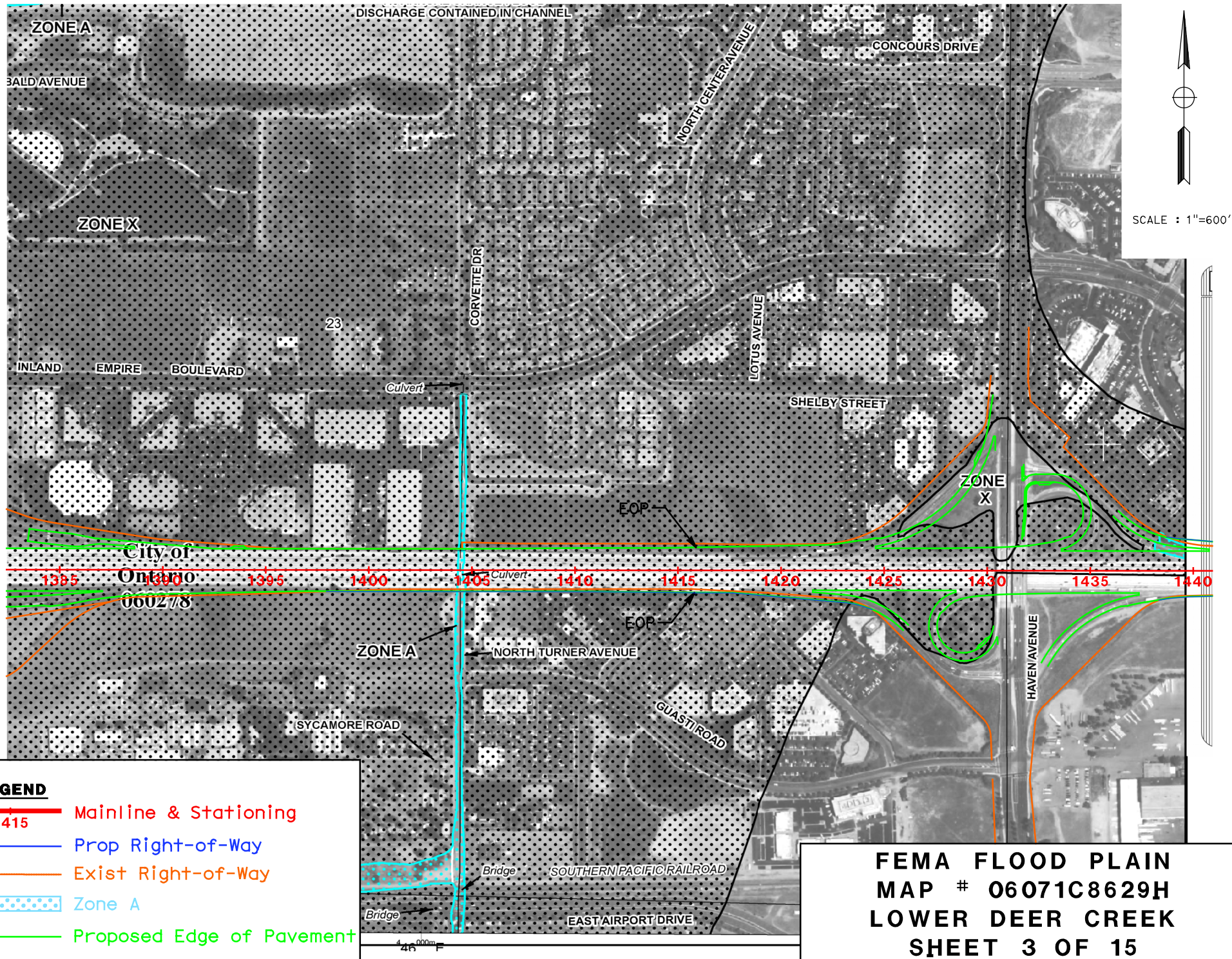
## **Appendix C** Proposed Roadway Improvements Adjacent to Floodplains

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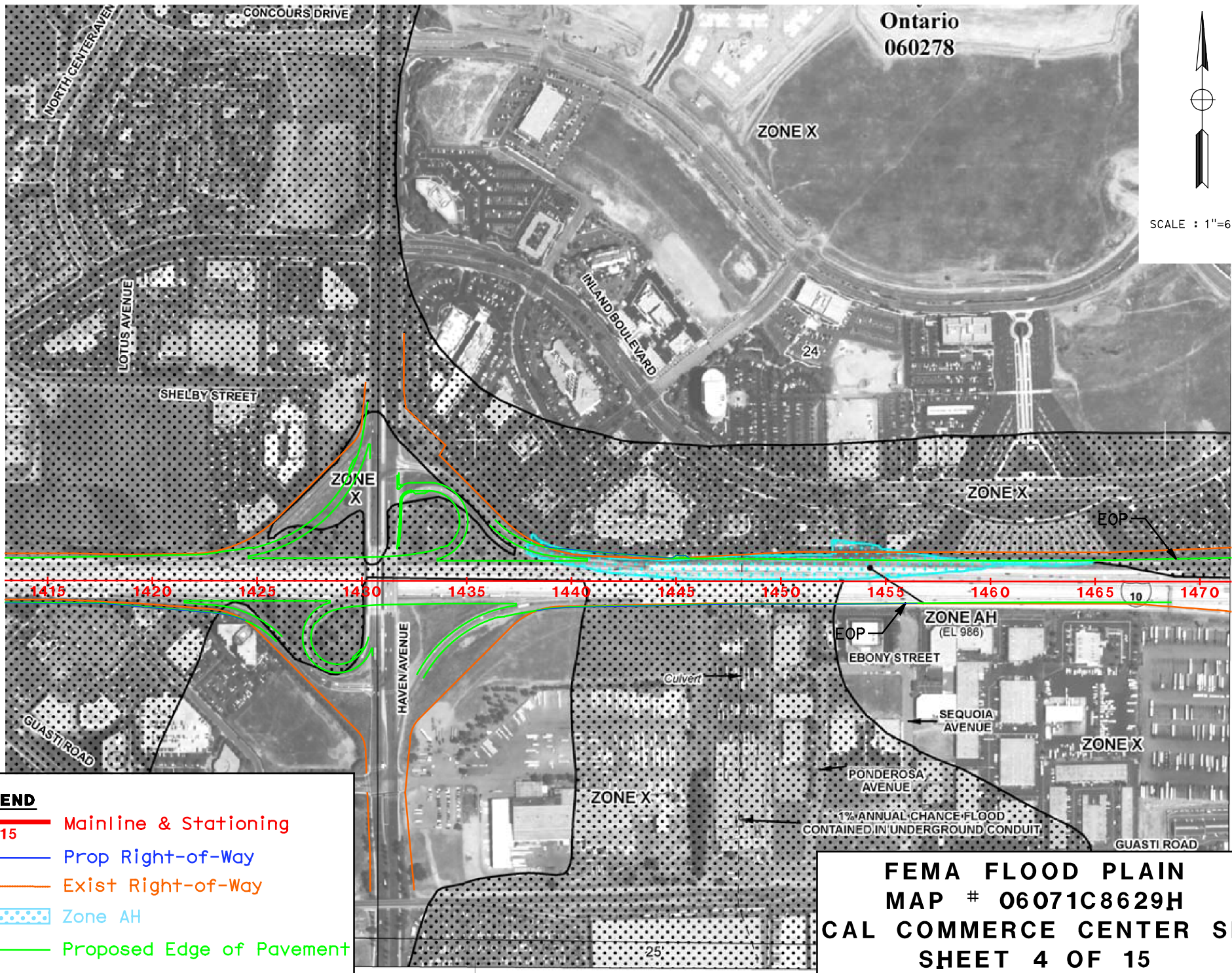




Ontario  
060278



SCALE : 1"=600'



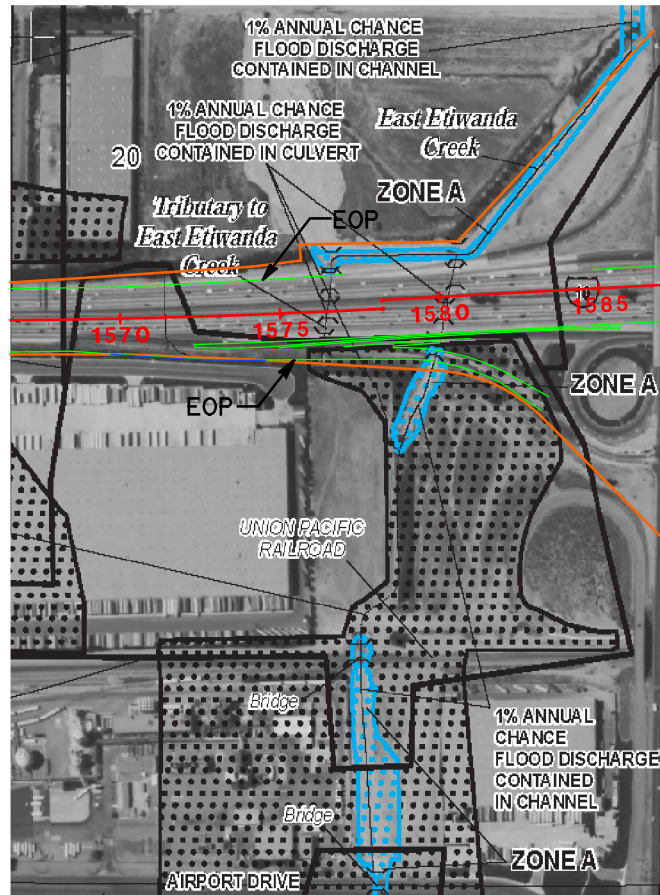
**LEGEND**

- 1415 Mainline & Stationing
- Prop Right-of-Way
- Exist Right-of-Way
- Zone AH
- Proposed Edge of Pavement






**FEMA FLOOD PLAIN  
MAP # 06071C8629H  
CAL COMMERCE CENTER SD  
SHEET 4 OF 15**



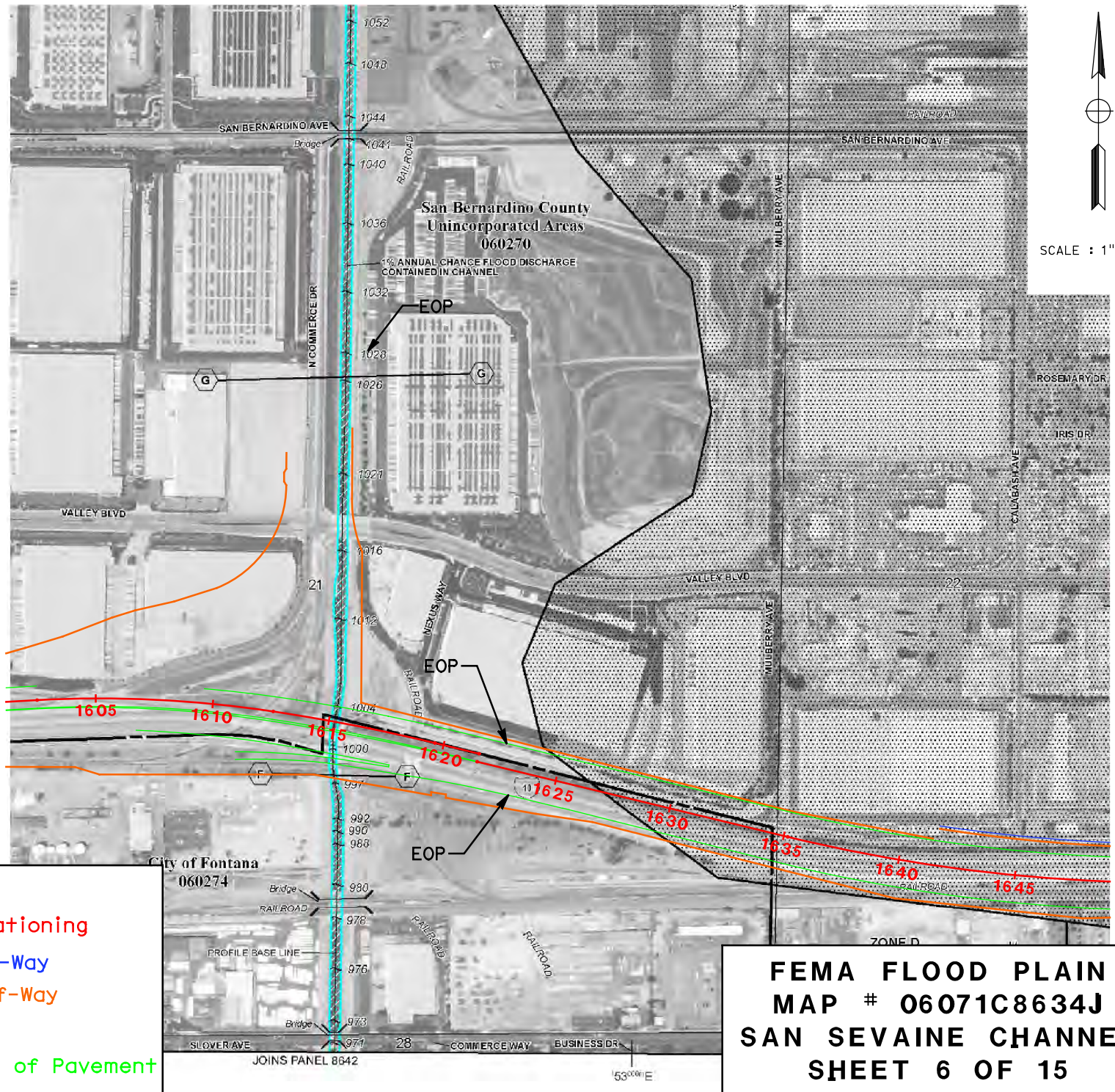
SCALE : 1"=600'

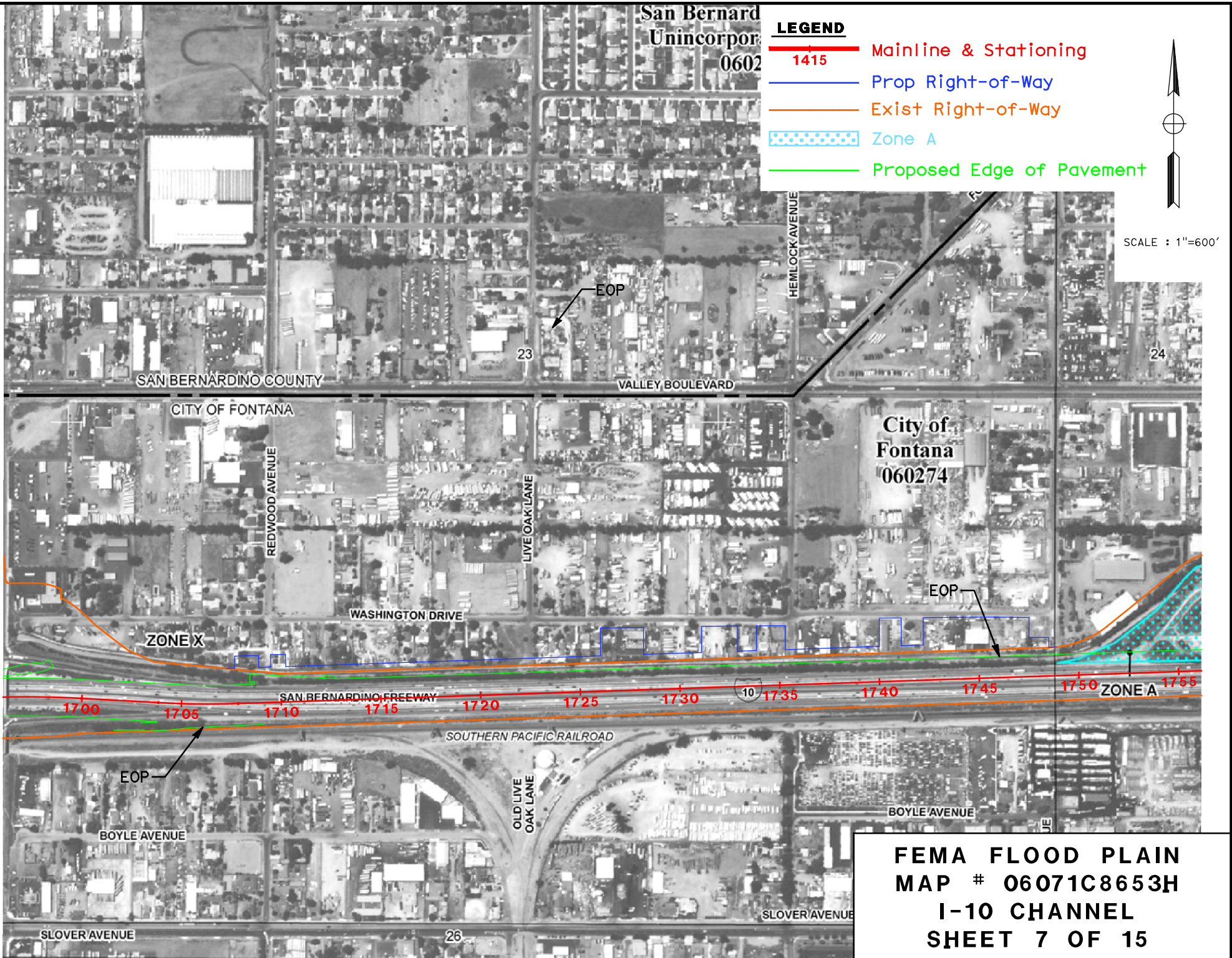


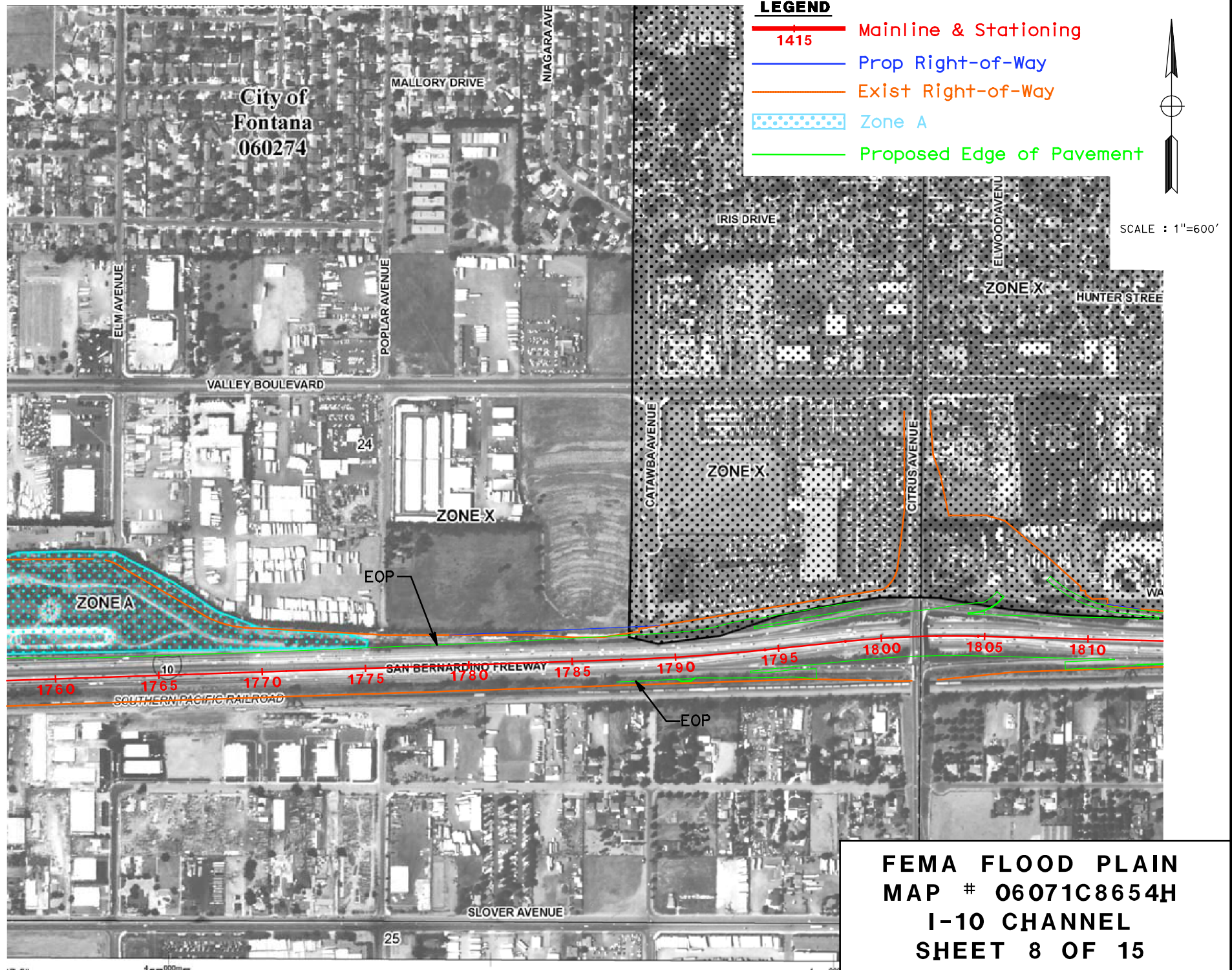
**LEGEND**

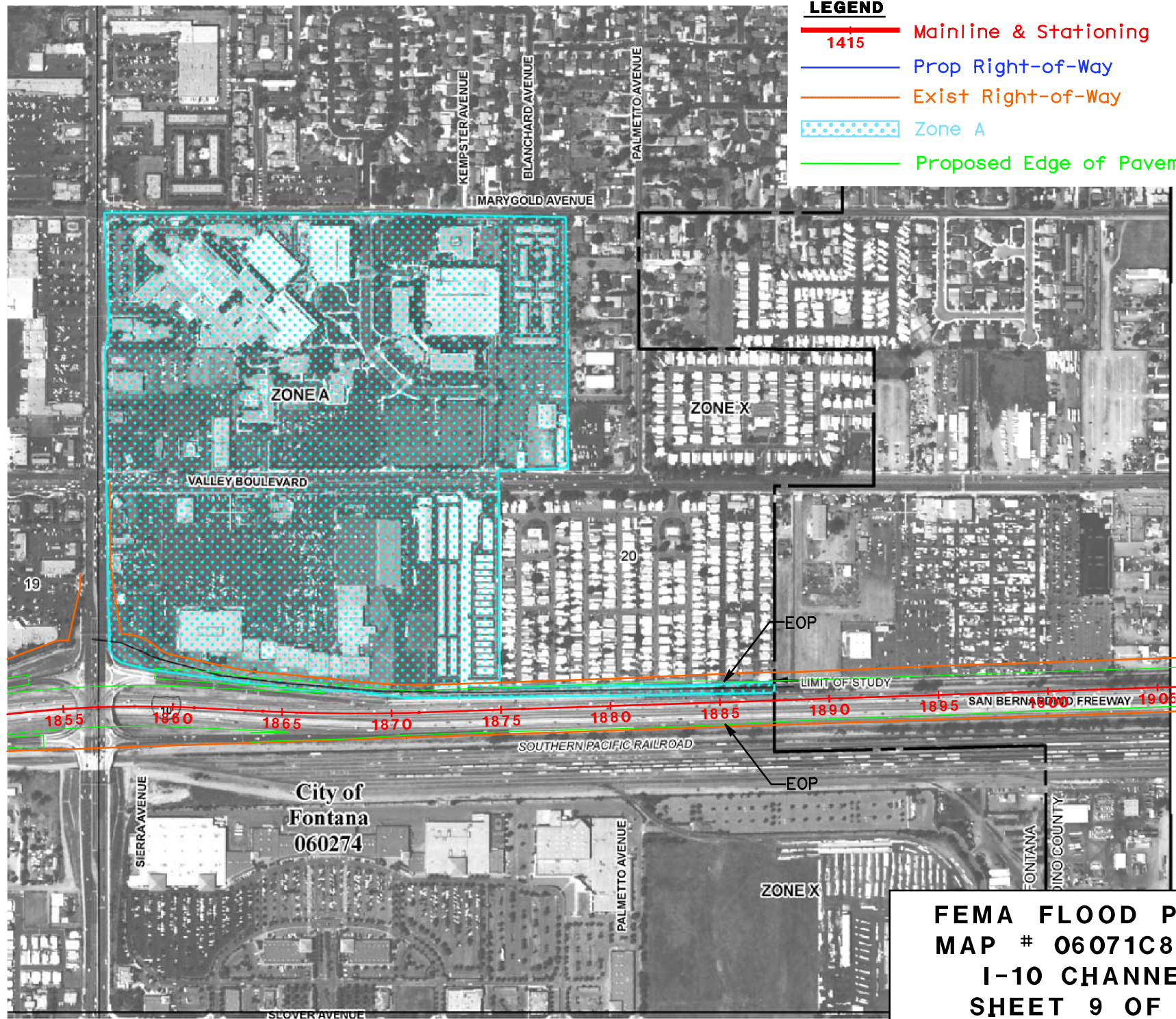
-  Mainline & Stationing
-  Prop Right-of-Way
-  Exist Right-of-Way
-  Zone A
-  Proposed Edge of Pavement

FEMA FLOOD PLAIN  
MAP # 06071C8634H  
EAST ETIWANDA CREEK  
SHEET 5 OF 15









**FEMA FLOOD PLAIN  
MAP # 06071C8658H  
I-10 CHANNEL  
SHEET 9 OF 15**



**CITY OF COLTON**  
060273

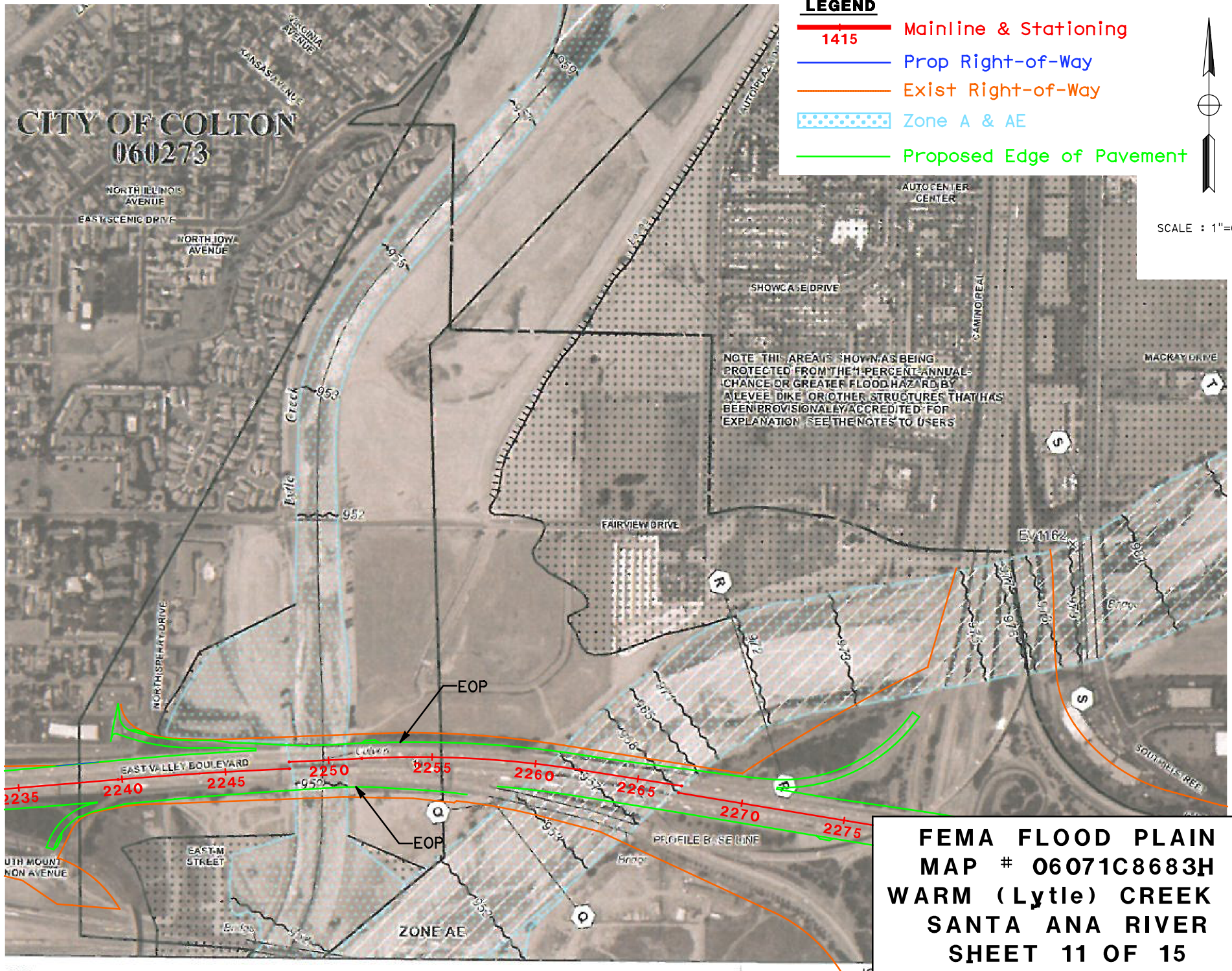
**LEGEND**

- 1415 Mainline & Stationing
- Prop Right-of-Way
- Exist Right-of-Way
- Zone A & AE
- Proposed Edge of Pavement



SCALE : 1"=600'

NOTE THIS AREA IS SHOWN AS BEING PROTECTED FROM THE 1 PERCENT ANNUAL CHANCE OR GREATER FLOOD HAZARD BY A LEVEE DIKE OR OTHER STRUCTURES THAT HAS BEEN PROVISIONALLY ACCREDITED FOR EXPLANATION SEE THE NOTES TO USERS



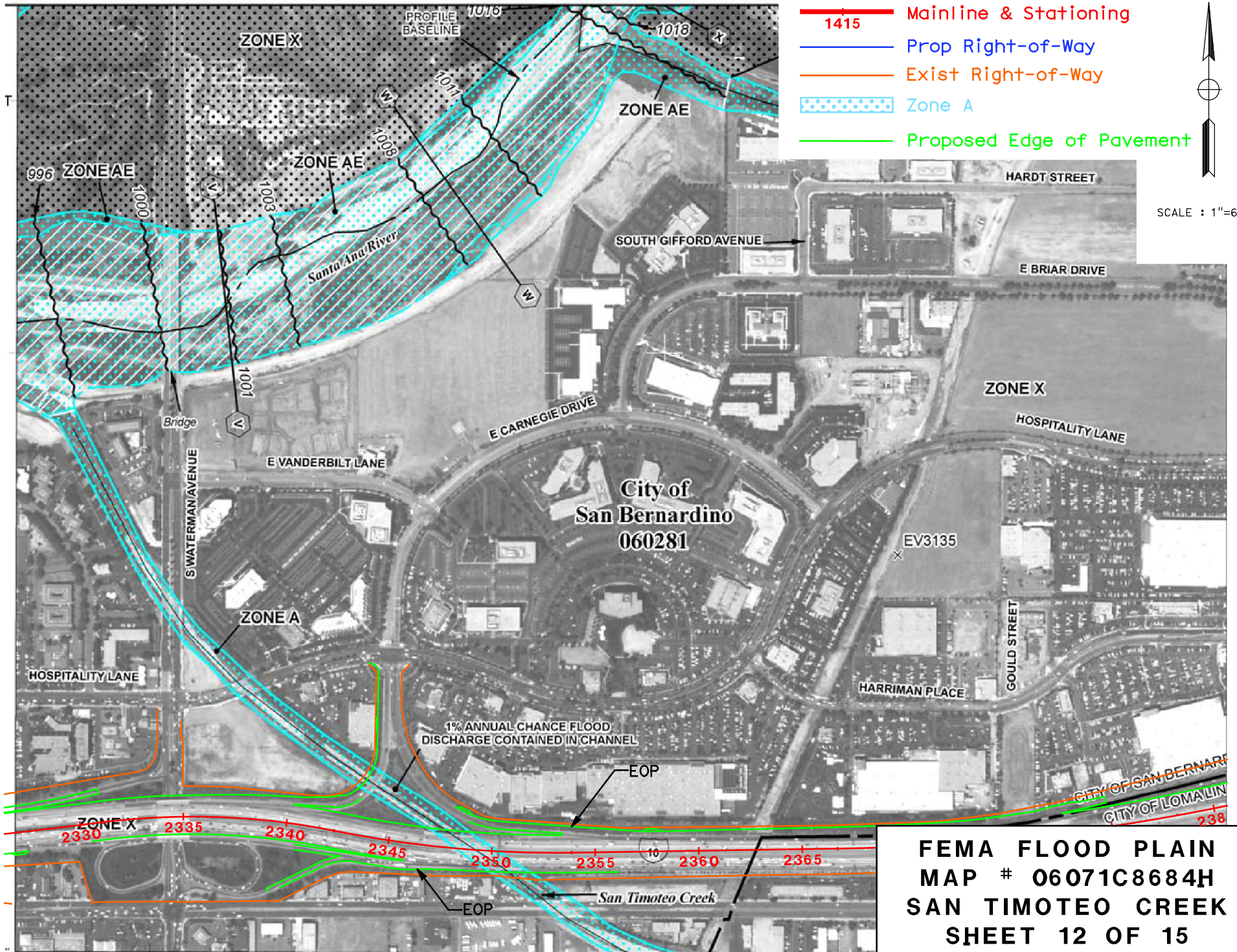
**FEMA FLOOD PLAIN  
MAP # 06071C8683H  
WARM (Lytle) CREEK &  
SANTA ANA RIVER  
SHEET 11 OF 15**

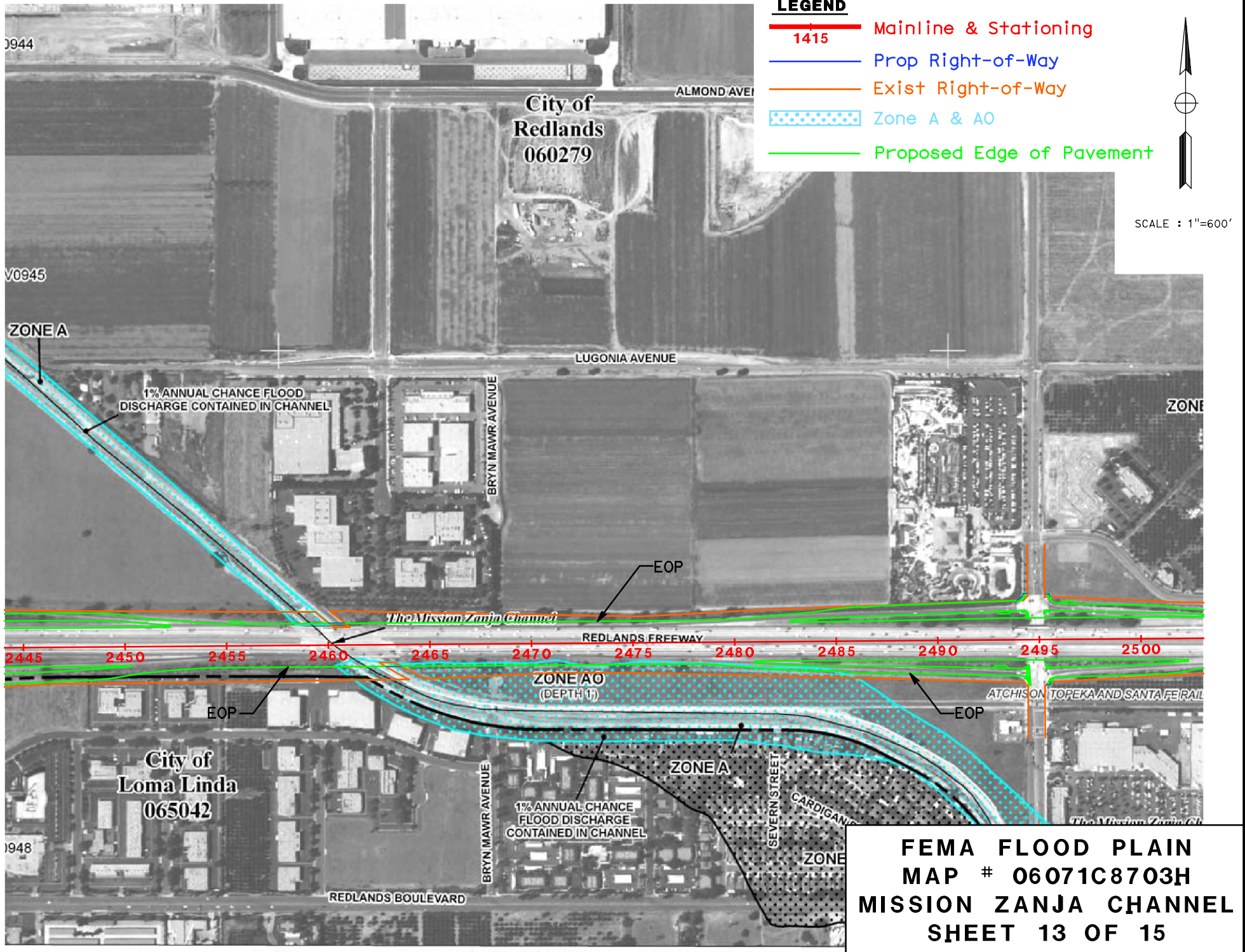
# LEGEND

- 1415 Mainline & Stationing
- Prop Right-of-Way
- Exist Right-of-Way
- Zone A
- Proposed Edge of Pavement



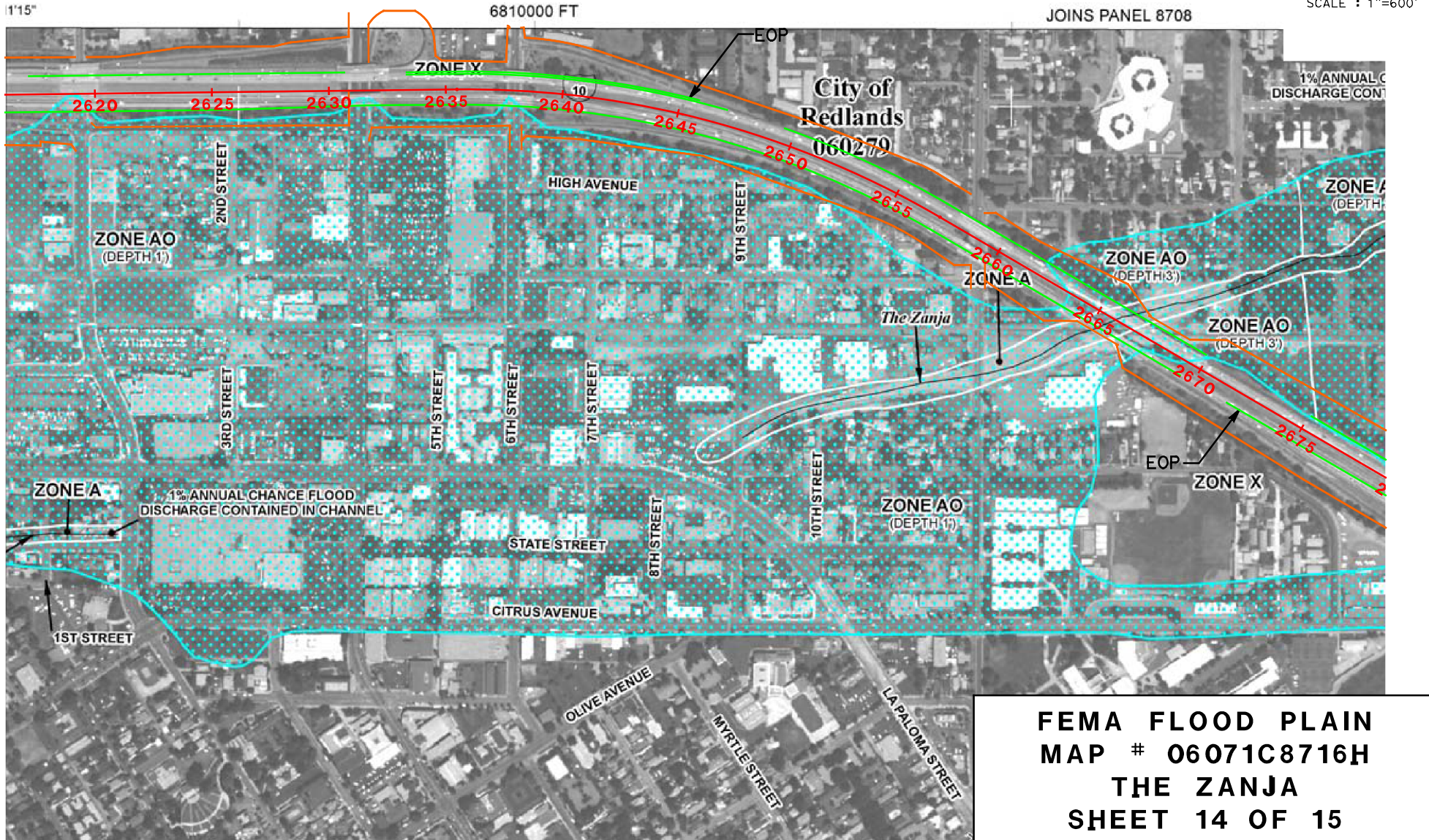
SCALE : 1"=600'





# LEGEND

- 1415 Mainline & Stationing
- Prop Right-of-Way
- Exist Right-of-Way
- Zone A & A0
- Proposed Edge of Pavement





SCALE : 1"=600'

**FEMA FLOOD PLAIN  
MAP # 06071C8716H  
THE ZANJA  
SHEET 15 OF 15**



## **Appendix D** Location Hydraulic Study Forms

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## LOCATION HYDRAULIC STUDY FORM

Dist. 8 Co. Sbd Rte. 10 P.M.   
EA 0C2500 Bridge No. 54-1117

Floodplain Description: West Cucamonga Creek Channel

1. Description of Proposal (include any physical barriers i.e. concrete barriers, soundwalls, etc. and design elements to minimize floodplain impacts)

Freeway widening and retaining wall

2. ADT: Current 260,970 Projected 378,900

3. Hydraulic Data: Base Flood  $Q_{100} =$  3,134  $\text{ft}^3 / \text{s}$

$WSE_{100} =$  unknown The flood of record, if greater than  $Q_{100}$ :

$Q =$  unknown  $\text{ft}^3 / \text{s}$

$WSE =$  unknown

Overtopping flood  $Q =$  unknown  $\text{m}^3 / \text{s}$

$WSE =$  unknown

Are NFIP maps and studies available? YES X NO

4. Is the highway location alternative within a regulatory floodway ?

YES

NO X

5. Attach map with flood limits outlined showing all buildings or other improvements within the base floodplain.

Potential  $Q_{100}$  backwater damages:

A. Residences?	NO <u>X</u>	YES <u></u>
B. Other Bldgs?	NO <u>X</u>	YES <u></u>
C. Crops?	NO <u>X</u>	YES <u></u>
D. Natural and beneficial floodplain values?	NO <u>X</u>	YES <u></u>

6. Type of Traffic:

A. Emergency supply or evacuation route?	NO <u>X</u>	YES <u></u>
B. Emergency vehicle access?	NO <u>X</u>	YES <u></u>
C. Practicable detour available?	NO <u></u>	YES <u>X</u>
D. School bus or mail route?	NO <u>X</u>	YES <u></u>

8. Estimated value of Q<sub>100</sub> flood damages (if any) – moderate risk level.

9.	Assessment of Level of Risk	Low	X
		Moderate	
		High	

Signature – Dist. Project Engineer \_\_\_\_\_ Date \_\_\_\_\_  
(Item numbers 1,2,6,8)

## LOCATION HYDRAULIC STUDY FORM

Dist. 8 Co. Sbd Rte. 10 P.M.   
Bridge 54-438L & 54-  
EA 0C2500 No. 438R  
Floodplain Description: Cucamonga Creek

1. Description of Proposal (include any physical barriers i.e. concrete barriers, soundwalls, etc. and design elements to minimize floodplain impacts)

Freeway inside widening

2. ADT: Current 262,080 Projected 384,850

3. Hydraulic Data: Base Flood  $Q_{100} =$  23,500  $\text{ft}^3 / \text{s}$

$WSE_{100} =$  unknown The flood of record, if greater than  $Q_{100}$ :

$Q =$  unknown  $\text{ft}^3 / \text{s}$   $WSE =$  unknown

Overtopping flood  $Q =$  unknown  $\text{m}^3 / \text{s}$   $WSE =$  unknown

Are NFIP maps and studies available? YES X NO

4. Is the highway location alternative within a regulatory floodway ?

YES  NO X

5. Attach map with flood limits outlined showing all buildings or other improvements within the base floodplain.

Potential  $Q_{100}$  backwater damages:

A. Residences? NO X YES

B. Other Bldgs? NO X YES

C. Crops? NO X YES

D. Natural and beneficial floodplain values? NO X YES

6. Type of Traffic:

A. Emergency supply or evacuation route? NO X YES

B. Emergency vehicle access? NO X YES

C. Practicable detour available? NO  YES X



## LOCATION HYDRAULIC STUDY FORM

Dist. 8 Co. Sbd Rte. 10 P.M.

EA 0C2500 Bridge No. None

Floodplain Description: Lower Deer Creek Channel

1. Description of Proposal (include any physical barriers i.e. concrete barriers, soundwalls, etc. and design elements to minimize floodplain impacts)

Freeway widening and retaining wall

2. ADT: Current 257,580 Projected 408,460

3. Hydraulic Data: Base Flood  $Q_{100} =$  unknown  $\text{ft}^3 / \text{s}$

$WSE_{100} =$  unknown The flood of record, if greater than  $Q_{100}$ :

$Q =$  unknown  $\text{ft}^3 / \text{s}$   $WSE =$  unknown

Overtopping flood  $Q =$  unknown  $\text{m}^3 / \text{s}$   $WSE =$  unknown

Are NFIP maps and studies available? YES X NO

4. Is the highway location alternative within a regulatory floodway ?

YES  NO X

5. Attach map with flood limits outlined showing all buildings or other improvements within the base floodplain.

Potential  $Q_{100}$  backwater damages:

A. Residences? NO X YES

B. Other Bldgs? NO X YES

C. Crops? NO X YES

D. Natural and beneficial floodplain values? NO X YES

6. Type of Traffic:

A. Emergency supply or evacuation route? NO X YES

B. Emergency vehicle access? NO X YES

C. Practicable detour available? NO  YES X

D. School bus or mail route? NO X YES           

7. Estimated duration of traffic interruption for 100-year event hours: 0

8. Estimated value of Q<sub>100</sub> flood damages (if any) – moderate risk level.

A.	Roadway	\$	0
B.	Property	\$	0
	Total	\$	0

9.	Assessment of Level of Risk	Low	X
		Moderate	
		High	

For High Risk projects, during design phase, additional Design Study Risk Analysis May be necessary to determine design alternative.

Signature – Dist. Hydraulic Engineer \_\_\_\_\_ Date \_\_\_\_\_  
(Item numbers 3,4,5,7,9)

Is there any longitudinal encroachment, significant encroachment, or any support of incompatible Floodplain development?

NO                      X                      YES

If yes, provide evaluation and discussion of practicability of alternatives in accordance with 23 CFR 650.113

Information developed to comply with the Federal requirement for the Location Hydraulic Study shall be retained in the project files.

Signature – Dist. Project Engineer \_\_\_\_\_ Date \_\_\_\_\_  
(Item numbers 1,2,6,8)

## LOCATION HYDRAULIC STUDY FORM

Dist. 8 Co. Sbd Rte. 10 P.M. 8.2

EA 0C2500 Bridge No. None

Floodplain Description: Cal Commerce Center Storm Drain

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1. Description of Proposal (include any physical barriers i.e. concrete barriers, soundwalls, etc. and design elements to minimize floodplain impacts)

Freeway widening and embankment fill

2. ADT: Current 263,160 Projected 419,760

3. Hydraulic Data: Base Flood  $Q_{100}$ = unknown  $\text{ft}^3 / \text{s}$

$WSE_{100}$ = unknown The flood of record, if greater than  $Q_{100}$ : unknown

$Q$ = unknown  $\text{ft}^3 / \text{s}$   $WSE$ = unknown

Overtopping flood  $Q$ = unknown  $\text{ft}^3 / \text{s}$   $WSE$ = unknown

Are NFIP maps and studies available? YES X NO

4. Is the highway location alternative within a regulatory floodway ?

YES  NO X

5. Attach map with flood limits outlined showing all buildings or other improvements within the base floodplain.

Potential  $Q_{100}$  backwater damages:

A. Residences? NO X YES

B. Other Bldgs? NO X YES

C. Crops? NO X YES

D. Natural and beneficial floodplain values? NO X YES

6. Type of Traffic:

A. Emergency supply or evacuation route? NO X YES

B. Emergency vehicle access? NO X YES

C. Practicable detour available? NO  YES X

D. School bus or mail route? NO  X  YES

7. Estimated duration of traffic interruption for 100-year event hours: 2

8. Estimated value of Q<sub>100</sub> flood damages (if any) – moderate risk level.

A.	Roadway	\$	0
B.	Property	\$	0
	Total	\$	0

9.	Assessment of Level of Risk	Low	X
		Moderate	
		High	

For High Risk projects, during design phase, additional Design Study Risk Analysis May be necessary to determine design alternative.

Signature – Dist. Hydraulic Engineer \_\_\_\_\_ Date \_\_\_\_\_  
(Item numbers 3,4,5,7,9)

Is there any longitudinal encroachment, significant encroachment, or any support of incompatible Floodplain development?

NO                      X                      YES

If yes, provide evaluation and discussion of practicability of alternatives in accordance with 23 CFR 650.113

Information developed to comply with the Federal requirement for the Location Hydraulic Study shall be retained in the project files.

Signature – Dist. Project Engineer \_\_\_\_\_ Date \_\_\_\_\_  
(Item numbers 1,2,6,8)

## LOCATION HYDRAULIC STUDY FORM

Dist. 8 Co. Sbd Rte. 10 P.M. 10.99  
Bridge  
EA 0C2500 No. 54 0378L R S  
Floodplain Description: Etiwanda Creek Floodplain

1. Description of Proposal (include any physical barriers i.e. concrete barriers, soundwalls, etc. and design elements to minimize floodplain impacts)

Bridge widening and embankment fill

2. ADT: Current 215,000 Projected 354,540

3. Hydraulic Data: Base Flood  $Q_{100} =$  1,260  $\text{ft}^3 / \text{s}$   
 $WSE_{100} =$  unknown The flood of record, if greater than  $Q_{100}$ : unknown  
 $Q =$  unknown  $\text{ft}^3 / \text{s}$   $WSE =$  unknown  
Overtopping flood  $Q =$  unknown  $\text{m}^3 / \text{s}$   $WSE =$  unknown  
Are NFIP maps and studies available? YES X NO

4. Is the highway location alternative within a regulatory floodway ?

YES  NO X

5. Attach map with flood limits outlined showing all buildings or other improvements within the base floodplain.

Potential  $Q_{100}$  backwater damages:

A. Residences?	NO <u>X</u>	YES <u></u>
B. Other Bldgs?	NO <u>X</u>	YES <u></u>
C. Crops?	NO <u>X</u>	YES <u></u>
D. Natural and beneficial floodplain values?	NO <u>X</u>	YES <u></u>

6. Type of Traffic:

A. Emergency supply or evacuation route?	NO <u>X</u>	YES <u></u>
B. Emergency vehicle access?	NO <u>X</u>	YES <u></u>
C. Practicable detour available?	NO <u></u>	YES <u>X</u>

D. School bus or mail route? NO  X  YES

7. Estimated duration of traffic interruption for 100-year event hours: 0

8. Estimated value of Q<sub>100</sub> flood damages (if any) – moderate risk level.

A.	Roadway	\$	0
B.	Property	\$	0
	Total	\$	0

9.	Assessment of Level of Risk	Low	<u>X</u>
		Moderate	<u>          </u>
		High	<u>          </u>

For High Risk projects, during design phase, additional Design Study Risk Analysis May be necessary to determine design alternative.

Signature – Dist. Hydraulic Engineer \_\_\_\_\_ Date \_\_\_\_\_  
(Item numbers 3,4,5,7,9)

Is there any longitudinal encroachment, significant encroachment, or any support of incompatible Floodplain development?

NO                      X                      YES

If yes, provide evaluation and discussion of practicability of alternatives in accordance with 23 CFR 650.113

Information developed to comply with the Federal requirement for the Location Hydraulic Study shall be retained in the project files.

Signature – Dist. Project Engineer \_\_\_\_\_ Date \_\_\_\_\_  
(Item numbers 1,2,6,8)

## LOCATION HYDRAULIC STUDY FORM

Dist. 8 Co. Sbd Rte. 10 P.M. 11.64  
EA 0C2500 Bridge No. 54 0454 L  
R S

Floodplain Description: San Sevaine Channel crossing under I-10. Q100 is contained within concrete lined rectangular channel.

1. Description of Proposal (include any physical barriers i.e. concrete barriers, soundwalls, etc. and design elements to minimize floodplain impacts)

Bridge Widening

2. ADT: Current 203,220 Projected 337,290

3. Hydraulic Data: Base Flood  $Q_{100} =$  20,360  $\text{ft}^3 / \text{s}$

$WSE_{100} =$  unknown The flood of record, if greater than  $Q_{100}$ :

$Q =$  unknown  $\text{ft}^3 / \text{s}$   $WSE =$  unknown

Overtopping flood  $Q =$  unknown  $\text{m}^3 / \text{s}$   $WSE =$  unknown

Are NFIP maps and studies available? YES X NO

4. Is the highway location alternative within a regulatory floodway ?

YES X NO

5. Attach map with flood limits outlined showing all buildings or other improvements within the base floodplain.

Potential  $Q_{100}$  backwater damages:

A. Residences?	NO <u>X</u>	YES <u></u>
B. Other Bldgs?	NO <u>X</u>	YES <u></u>
C. Crops?	NO <u>X</u>	YES <u></u>
D. Natural and beneficial floodplain values?	NO <u>X</u>	YES <u></u>

6. Type of Traffic:

A. Emergency supply or evacuation route?	NO <u>X</u>	YES <u></u>
B. Emergency vehicle access?	NO <u>X</u>	YES <u></u>

### C. Practicable detour available?

NO \_\_\_\_\_

YES X

#### D. School bus or mail route?

NO            X

YES

7. Estimated duration of traffic interruption for 100-year event hours: 0

8. Estimated value of Q<sub>100</sub> flood damages (if any) – moderate risk level.

A.	Roadway	\$	0
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B.	Property	\$	0
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Total	\$	0
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9	Assessment of Level of Risk	Low	X
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Moderate

High

For High Risk projects, during design phase, additional Design Study Risk Analysis May be necessary to determine design alternative.

Signature – Dist. Hydraulic Engineer \_\_\_\_\_ Date \_\_\_\_\_  
(Item numbers 3,4,5,7,9)

Is there any longitudinal encroachment, significant encroachment, or any support of incompatible Floodplain development?

NO                      X                      YES

If yes, provide evaluation and discussion of practicability of alternatives in accordance with 23 CFR 650.113

Information developed to comply with the Federal requirement for the Location Hydraulic Study shall be retained in the project files.

Signature – Dist. Project Engineer \_\_\_\_\_ Date \_\_\_\_\_  
(Item numbers 1,2,6,8)

## LOCATION HYDRAULIC STUDY FORM

Dist. 8 Co. Sbd Rte. 10 P.M. 14.5

EA 0C2500 Bridge No.

Floodplain Description: I-10 Channel between Cherry and Citrus Avenues  
and Citrus and east of Sierra

1. Description of Proposal (include any physical barriers i.e. concrete barriers, soundwalls, etc. and design elements to minimize floodplain impacts)

Freeway widening and embankment fill

2. ADT: Current 195,360 Projected 327,180

3. Hydraulic Data: Base Flood  $Q_{100} =$  ~542  $\text{ft}^3 / \text{s}$

$WSE_{100} =$  unknown The flood of record, if greater than  $Q_{100}$ : unknown

$Q =$  unknown  $\text{ft}^3 / \text{s}$

$WSE =$  unknown

Overtopping flood  $Q =$  unknown  $\text{ft}^3 / \text{s}$   $WSE =$  unknown

Are NFIP maps and studies available? YES X NO

4. Is the highway location alternative within a regulatory floodway ?

YES  NO X

5. Attach map with flood limits outlined showing all buildings or other improvements within the base floodplain.

Potential  $Q_{100}$  backwater damages:

A. Residences? NO X YES

B. Other Bldgs? NO X YES

C. Crops? NO X YES

D. Natural and beneficial floodplain values? NO X YES

6. Type of Traffic:

A. Emergency supply or evacuation route? NO X YES

B. Emergency vehicle access? NO X YES

C. Practicable detour available? NO  YES X

D. School bus or mail route? NO  X  YES

7. Estimated duration of traffic interruption for 100-year event hours: 2

8. Estimated value of Q<sub>100</sub> flood damages (if any) – moderate risk level.

A.	Roadway	\$	0
B.	Property	\$	0
	Total	\$	0

9	Assessment of Level of Risk	Low	X
		Moderate	
		High	

For High Risk projects, during design phase, additional Design Study Risk Analysis May be necessary to determine design alternative.

Signature – Dist. Hydraulic Engineer \_\_\_\_\_ Date \_\_\_\_\_  
(Item numbers 3,4,5,7,9)

Is there any longitudinal encroachment, significant encroachment, or any support of incompatible Floodplain development?

NO                      X                      YES

If yes, provide evaluation and discussion of practicability of alternatives in accordance with 23 CFR 650.113

Information developed to comply with the Federal requirement for the Location Hydraulic Study shall be retained in the project files.

Signature – Dist. Project Engineer \_\_\_\_\_ Date \_\_\_\_\_  
(Item numbers 1,2,6,8)

## LOCATION HYDRAULIC STUDY FORM

Dist. 8 Co. Sbd Rte. 10 P.M. 22.36  
EA 0C2500 Bridge No. None

Floodplain Description: Colton Southwest Storm Drain

1. Description of Proposal (include any physical barriers i.e. concrete barriers, soundwalls, etc. and design elements to minimize floodplain impacts)

Freeway widening and retaining wall

2. ADT: Current 167,160 Projected 290,190

3. Hydraulic Data: Base Flood  $Q_{100} =$  1,000  $\text{ft}^3 / \text{s}$

$WSE_{100} =$  unknown The flood of record, if greater than  $Q_{100}$ :

$Q =$  unknown  $\text{ft}^3 / \text{s}$

$WSE =$  unknown

Overtopping flood  $Q =$  unknown  $\text{m}^3 / \text{s}$

$WSE =$  unknown

Are NFIP maps and studies available? YES X NO

4. Is the highway location alternative within a regulatory floodway ?

YES

NO X

5. Attach map with flood limits outlined showing all buildings or other improvements within the base floodplain.

Potential  $Q_{100}$  backwater damages:

A. Residences?	NO <u>X</u>	YES <u></u>
B. Other Bldgs?	NO <u>X</u>	YES <u></u>
C. Crops?	NO <u>X</u>	YES <u></u>
D. Natural and beneficial floodplain values?	NO <u>X</u>	YES <u></u>

6. Type of Traffic:

A. Emergency supply or evacuation route?	NO	<u>    X    </u>	YES	<u>          </u>
B. Emergency vehicle access?	NO	<u>    X    </u>	YES	<u>          </u>
C. Practicable detour available?	NO	<u>          </u>	YES	<u>    X    </u>
D. School bus or mail route?	NO	<u>    X    </u>	YES	<u>          </u>

7. Estimated duration of traffic interruption for 100-year event hours: 0

8. Estimated value of Q<sub>100</sub> flood damages (if any) – moderate risk level.

A.	Roadway	\$	0
B.	Property	\$	0
	Total	\$	0

9	Assessment of Level of Risk	Low	<u>X</u>
		Moderate	<u>          </u>
		High	<u>          </u>

For High Risk projects, during design phase, additional Design Study Risk Analysis May be necessary to determine design alternative.

Signature – Dist. Hydraulic Engineer \_\_\_\_\_ Date \_\_\_\_\_  
(Item numbers 3,4,5,7,9)

Is there any longitudinal encroachment, significant encroachment, or any support of incompatible Floodplain development?

NO                      X                      YES

If yes, provide evaluation and discussion of practicability of alternatives in accordance with 23 CFR 650.113

Information developed to comply with the Federal requirement for the Location Hydraulic Study shall be retained in the project files.

Signature – Dist. Project Engineer \_\_\_\_\_ Date \_\_\_\_\_  
(Item numbers 1,2,6,8)

## LOCATION HYDRAULIC STUDY FORM

Dist. 8 Co. Sbd Rte. 10 P.M. 22.9

EA 0C2500 Bridge No.

Floodplain Description: 11th Street Storm Drain adjacent to EB roadbed.

1. Description of Proposal (include any physical barriers i.e. concrete barriers, soundwalls, etc. and design elements to minimize floodplain impacts)

Freeway widening and retaining wall

2. ADT: Current  Projected

3. Hydraulic Data: Base Flood  $Q_{100} =$  490  $\text{ft}^3 / \text{s}$

$WSE_{100} =$  unknown The flood of record, if greater than  $Q_{100}$ :

$Q =$  unknown  $\text{ft}^3 / \text{s}$   $WSE =$  unknown

Overtopping flood  $Q =$  unknown  $\text{m}^3 / \text{s}$   $WSE =$  unknown

Are NFIP maps and studies available? YES X NO

4. Is the highway location alternative within a regulatory floodway ?

YES  NO X

5. Attach map with flood limits outlined showing all buildings or other improvements within the base floodplain.

Potential  $Q_{100}$  backwater damages:

A. Residences? NO X YES

B. Other Bldgs? NO X YES

C. Crops? NO X YES

D. Natural and beneficial floodplain values? NO X YES

6. Type of Traffic:

A. Emergency supply or evacuation route? NO X YES

B. Emergency vehicle access? NO X YES

C. Practicable detour available? NO  YES X

D. School bus or mail route? NO X YES           

7. Estimated duration of traffic interruption for 100-year event hours: 0

8. Estimated value of Q<sub>100</sub> flood damages (if any) – moderate risk level.

A.	Roadway	\$	0
B.	Property	\$	0
	Total	\$	0

9	Assessment of Level of Risk	Low	X
		Moderate	
		High	

For High Risk projects, during design phase, additional Design Study Risk Analysis May be necessary to determine design alternative.

Signature – Dist. Hydraulic Engineer \_\_\_\_\_ Date \_\_\_\_\_  
(Item numbers 3,4,5,7,9)

Is there any longitudinal encroachment, significant encroachment, or any support of incompatible Floodplain development?

NO                      X                      YES

If yes, provide evaluation and discussion of practicability of alternatives in accordance with 23 CFR 650.113

Information developed to comply with the Federal requirement for the Location Hydraulic Study shall be retained in the project files.

Signature – Dist. Project Engineer \_\_\_\_\_ Date \_\_\_\_\_  
(Item numbers 1,2,6,8)

## LOCATION HYDRAULIC STUDY FORM

Dist. 8 Co. Sbd Rte. 10 P.M. 23.6

EA 0C2500 Bridge No. 54 0830 L  
R

Floodplain Description: Warm (Lytle) Creek Floodplain

1. Description of Proposal (include any physical barriers i.e. concrete barriers, soundwalls, etc. and design elements to minimize floodplain impacts)

Bridge Widening

2. ADT: Current 181,000 Projected 290,140

3. Hydraulic Data: Base Flood  $Q_{100} =$  67,000  $\text{ft}^3 / \text{s}$

$WSE_{100} =$  952 The flood of record, if greater than  $Q_{100}$ :

$Q =$  unknown  $\text{ft}^3 / \text{s}$   $WSE =$  unknown

Overtopping flood  $Q =$  unknown  $\text{m}^3 / \text{s}$   $WSE =$  unknown

Are NFIP maps and studies available? YES X NO

4. Is the highway location alternative within a regulatory floodway ?

YES  NO X

5. Attach map with flood limits outlined showing all buildings or other improvements within the base floodplain.

Potential  $Q_{100}$  backwater damages:

A. Residences? NO X YES

B. Other Bldgs? NO X YES

C. Crops? NO X YES

D. Natural and beneficial floodplain values? NO X YES

6. Type of Traffic:

A. Emergency supply or evacuation route? NO X YES

B. Emergency vehicle access? NO X YES

C. Practicable detour available? NO  YES X



## LOCATION HYDRAULIC STUDY FORM

Dist. 8 Co. Sbd Rte. 10 P.M. 23.82  
Bridge 54 092 G R  
EA 0C2500 No. L  
Floodplain Description: Santa Ana River Floodplain

1. Description of Proposal (include any physical barriers i.e. concrete barriers, soundwalls, etc. and design elements to minimize floodplain impacts)

Bridge Widening, Substructure Work in the Channel, Seismic Retrofit

2. ADT: Current 181,000 Projected 290,140

3. Hydraulic Data: Base Flood  $Q_{100} =$  70,000  $\text{ft}^3 / \text{s}$   
WSE<sub>100</sub>= 966 The flood of record, if greater than  $Q_{100}$ :  
 $Q =$  unknown  $\text{ft}^3 / \text{s}$  WSE= unknown  
Overtopping flood  $Q =$  unknown  $\text{m}^3 / \text{s}$  WSE= unknown  
Are NFIP maps and studies available? YES X NO

4. Is the highway location alternative within a regulatory floodway ?

YES X NO

5. Attach map with flood limits outlined showing all buildings or other improvements within the base floodplain.

Potential  $Q_{100}$  backwater damages:

A. Residences?	NO <u>X</u>	YES <u></u>
B. Other Bldgs?	NO <u>X</u>	YES <u></u>
C. Crops?	NO <u>X</u>	YES <u></u>
D. Natural and beneficial floodplain values?	NO <u>X</u>	YES <u></u>

6. Type of Traffic:

A. Emergency supply or evacuation route?	NO <u>X</u>	YES <u></u>
B. Emergency vehicle access?	NO <u>X</u>	YES <u></u>
C. Practicable detour available?	NO <u></u>	YES <u>X</u>

D. School bus or mail route? NO X YES           

7. Estimated duration of traffic interruption for 100-year event hours: 0

8. Estimated value of Q<sub>100</sub> flood damages (if any) – moderate risk level.

A.	Roadway	\$	0
B.	Property	\$	0
	Total	\$	0

9	Assessment of Level of Risk	Low	X
		Moderate	
		High	

For High Risk projects, during design phase, additional Design Study Risk Analysis May be necessary to determine design alternative.

Signature – Dist. Hydraulic Engineer \_\_\_\_\_ Date \_\_\_\_\_  
(Item numbers 3,4,5,7,9)

Is there any longitudinal encroachment, significant encroachment, or any support of incompatible Floodplain development?

NO                      X                      YES

If yes, provide evaluation and discussion of practicability of alternatives in accordance with 23 CFR 650.113

Information developed to comply with the Federal requirement for the Location Hydraulic Study shall be retained in the project files.

Signature – Dist. Project Engineer \_\_\_\_\_ Date \_\_\_\_\_  
(Item numbers 1,2,6,8)

## LOCATION HYDRAULIC STUDY FORM

Dist. 8 Co. Sbd Rte. 10 P.M. 25.46  
EA 0C2500 Bridge No. 54 0599  
Floodplain Description: San Timoteo Channel Floodplain

1. Description of Proposal (include any physical barriers i.e. concrete barriers, soundwalls, etc. and design elements to minimize floodplain impacts)

Bridge Widening, Substructure Work in the Channel, Pier Extensions

2. ADT: Current 387,950 Projected 639,160

3. Hydraulic Data: Base Flood  $Q_{100} =$  19,500  $\text{ft}^3 / \text{s}$   
WSE<sub>100</sub>= 1028 - 1029 The flood of record, if greater than  $Q_{100}$ :  
 $Q =$  unknown  $\text{ft}^3 / \text{s}$  WSE= unknown  
Overtopping flood  $Q =$  unknown  $\text{m}^3 / \text{s}$  WSE= unknown  
Are NFIP maps and studies available? YES X NO

4. Is the highway location alternative within a regulatory floodway ?  
YES  NO X

5. Attach map with flood limits outlined showing all buildings or other improvements within the base floodplain.

Potential  $Q_{100}$  backwater damages:

A. Residences?	NO <u>X</u>	YES <u></u>
B. Other Bldgs?	NO <u>X</u>	YES <u></u>
C. Crops?	NO <u>X</u>	YES <u></u>
D. Natural and beneficial floodplain values?	NO <u>X</u>	YES <u></u>

6. Type of Traffic:

A. Emergency supply or evacuation route?	NO <u>X</u>	YES <u></u>
B. Emergency vehicle access?	NO <u>X</u>	YES <u></u>
C. Practicable detour available?	NO <u></u>	YES <u>X</u>

D. School bus or mail route? NO  X  YES

7. Estimated duration of traffic interruption for 100-year event hours: 0

8. Estimated value of Q<sub>100</sub> flood damages (if any) – moderate risk level.

A.	Roadway	\$	0
B.	Property	\$	0
	Total	\$	0

9	Assessment of Level of Risk	Low	X
		Moderate	
		High	

For High Risk projects, during design phase, additional Design Study Risk Analysis May be necessary to determine design alternative.

Signature – Dist. Hydraulic Engineer \_\_\_\_\_ Date \_\_\_\_\_  
(Item numbers 3,4,5,7,9)

Is there any longitudinal encroachment, significant encroachment, or any support of incompatible Floodplain development?

NO                      X                      YES

If yes, provide evaluation and discussion of practicability of alternatives in accordance with 23 CFR 650.113

Information developed to comply with the Federal requirement for the Location Hydraulic Study shall be retained in the project files.

Signature – Dist. Project Engineer \_\_\_\_\_ Date \_\_\_\_\_  
(Item numbers 1,2,6,8)

## LOCATION HYDRAULIC STUDY FORM

Dist. 8 Co. Sbd Rte. 10 P.M. 27.64

EA 0C2500 Bridge No. 54 0570

Floodplain Description: Mission Channel Floodplain

1. Description of Proposal (include any physical barriers i.e. concrete barriers, soundwalls, etc. and design elements to minimize floodplain impacts)

Bridge Widening

2. ADT: Current 182,300 Projected 302,550

3. Hydraulic Data: Base Flood  $Q_{100} =$  7,576  $\text{ft}^3 / \text{s}$

WSE<sub>100</sub>= unknown The flood of record, if greater than  $Q_{100}$ :

$Q =$  unknown  $\text{ft}^3 / \text{s}$  WSE= unknown

Overtopping flood  $Q =$  unknown  $\text{m}^3 / \text{s}$  WSE= unknown

Are NFIP maps and studies available? YES X NO

4. Is the highway location alternative within a regulatory floodway ?

YES  NO X

5. Attach map with flood limits outlined showing all buildings or other improvements within the base floodplain.

Potential  $Q_{100}$  backwater damages:

A. Residences? NO X YES

B. Other Bldgs? NO X YES

C. Crops? NO X YES

D. Natural and beneficial floodplain values? NO X YES

6. Type of Traffic:

A. Emergency supply or evacuation route? NO X YES

B. Emergency vehicle access? NO X YES

C. Practicable detour available? NO  YES X

D. School bus or mail route? NO X YES

8. Estimated value of Q<sub>100</sub> flood damages (if any) – moderate risk level.

9	Assessment of Level of Risk	Low	X
		Moderate	
		High	

NO                      X                      YES

Signature – Dist. Project Engineer \_\_\_\_\_ Date \_\_\_\_\_  
(Item numbers 1,2,6,8)

## LOCATION HYDRAULIC STUDY FORM

Dist. 8 Co. Sbd Rte. 10 P.M. 31.52

EA 0C2500 Bridge No. 54 0472 L  
R

Floodplain Description: Zanja Channel Floodplain

1. Description of Proposal (include any physical barriers i.e. concrete barriers, soundwalls, etc. and design elements to minimize floodplain impacts)

Roadway widening

2. ADT: Current 163,270 Projected 274,570

3. Hydraulic Data: Base Flood  $Q_{100} =$  3,924  $\text{ft}^3 / \text{s}$

WSE<sub>100</sub>= unknown The flood of record, if greater than  $Q_{100}$ :

$Q =$  unknown  $\text{ft}^3 / \text{s}$  WSE= unknown

Overtopping flood  $Q =$  unknown  $\text{m}^3 / \text{s}$  WSE= unknown

Are NFIP maps and studies available? YES X NO

4. Is the highway location alternative within a regulatory floodway ?

YES  NO X

5. Attach map with flood limits outlined showing all buildings or other improvements within the base floodplain.

Potential  $Q_{100}$  backwater damages:

A. Residences? NO X YES

B. Other Bldgs? NO X YES

C. Crops? NO X YES

D. Natural and beneficial floodplain values? NO X YES

6. Type of Traffic:

A. Emergency supply or evacuation route? NO X YES

B. Emergency vehicle access? NO X YES

C. Practicable detour available? NO  YES X

D. School bus or mail route? NO X YES

8. Estimated value of Q<sub>100</sub> flood damages (if any) – moderate risk level.

9	Assessment of Level of Risk	Low	X
		Moderate	
		High	

Signature – Dist. Hydraulic Engineer \_\_\_\_\_ Date \_\_\_\_\_  
(Item numbers 3,4,5,7,9)

NO                      X                      YES

Information developed to comply with the Federal requirement for the Location Hydraulic Study shall be retained in the project files.

Signature – Dist. Project Engineer \_\_\_\_\_ Date \_\_\_\_\_  
(Item numbers 1,2,6,8)

## **Appendix E** Summary Floodplain Encroachment Report

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## SUMMARY FLOODPLAIN ENCROACHMENT REPORT

Dist. 8 Co.      Sbd      Rte. 10 P.M.       
Project No.: 0C2500 Bridge No.: 54-1117  
Limits: I-10 - L.A. County Line to Ford St. in Redlands

Floodplain Description: West Cucamonga Creek

### Zone A and AO

	No	Yes
1. Is the proposed action a longitudinal encroachment of the base floodplain?	<u>X</u>	<u>    </u>
2. Are the risks associated with the implementation of the proposed action significant?	<u>X</u>	<u>    </u>
3. Will the proposed action support probable incompatible floodplain development?	<u>X</u>	<u>    </u>
4. Are there any significant impacts on natural and beneficial floodplain values?	<u>X</u>	<u>    </u>
5. Routine construction procedures are required to minimize impacts on the floodplain. Are there any special mitigation measures necessary to minimize impacts or restore and preserve natural and beneficial floodplain values? If yes, explain.	<u>X</u>	<u>    </u>
6. Does the proposed action constitute a significant floodplain encroachment as defined in 23 CFR, Section 650.105(q).	<u>X</u>	<u>    </u>
7. Are Location Hydraulic Studies that document the above answers on file? If not explain.	<u>    </u>	<u>X</u>

PREPARED BY:

\_\_\_\_\_  
Signature - Dist. Hydraulic Engineer

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature - Dist. Environmental Branch Chief

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature - Dist. Project Engineer

\_\_\_\_\_  
Date

## SUMMARY FLOODPLAIN ENCROACHMENT REPORT

Dist. 8 Co. Sbd Rte. 10 P.M. \_\_\_\_\_  
Project No.: 0C2500 Bridge No.: \_\_\_\_\_  
Limits: I-10 – LA County Line to Ford St. in Redlands

Floodplain Description: Cucamonga Creek/Deer Creek Floodplain

		No	Yes
1.	Is the proposed action a longitudinal encroachment of the base floodplain?	<u>X</u>	_____
2.	Are the risks associated with the implementation of the proposed action significant?	<u>X</u>	_____
3.	Will the proposed action support probable incompatible floodplain development?	<u>X</u>	_____
4.	Are there any significant impacts on natural and beneficial floodplain values?	<u>X</u>	_____
5.	Routine construction procedures are required to minimize impacts on the floodplain. Are there any special mitigation measures necessary to minimize impacts or restore and preserve natural and beneficial floodplain values? If yes, explain.	<u>X</u>	_____
6.	Does the proposed action constitute a significant floodplain encroach-ment as defined in 23 CFR, Section 650.105(q).	<u>X</u>	_____
7.	Are Location Hydraulic Studies that document the above answers on file? If not explain.	_____	<u>X</u>

PREPARED BY:

\_\_\_\_\_  
Signature - Dist. Hydraulic Engineer

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature - Dist. Environmental Branch Chief

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature - Dist. Project Engineer

\_\_\_\_\_  
Date

# SUMMARY FLOODPLAIN ENCROACHMENT REPORT

Dist. <u>8</u>	Co. <u>Sbd</u>	Rte. <u>10</u>	P.M. <u></u>
Project No.: <u>0C2500</u>	Bridge No.: <u>N/A</u>		
Limits:	<u>I-10 L.A. County Line to Ford St. in Redlands</u>		

Floodplain Description: Lower Deer Creek

	No	Yes
1. Is the proposed action a longitudinal encroachment of the base floodplain?	X	
2. Are the risks associated with the implementation of the proposed action significant?	X	
3. Will the proposed action support probable incompatible floodplain development?	X	
4. Are there any significant impacts on natural and beneficial floodplain values?	X	
5. Routine construction procedures are required to minimize impacts on the floodplain. Are there any special mitigation measures necessary to minimize impacts or restore and preserve natural and beneficial floodplain values? If yes, explain.	X	
6. Does the proposed action constitute a significant floodplain encroachment as defined in 23 CFR, Section 650.105(q).	X	
7. Are Location Hydraulic Studies that document the above answers on file? If not explain.		X

PREPARED BY:

Signature - Dist. Hydraulic Engineer

Date \_\_\_\_\_

Signature - Dist. Environmental Branch Chief

Date \_\_\_\_\_

Signature - Dist. Project Engineer

Date \_\_\_\_\_

## SUMMARY FLOODPLAIN ENCROACHMENT REPORT

Dist. 8 Co. Sbd Rte. 10 P.M. 8.2

Project No.: 0C2500 Bridge No.:

Limits: I-10 - L.A. County Line to Ford St. in Redlands

Floodplain Description: Cal Commerce Center Storm Drain

Zone AH

	No	Yes
1. Is the proposed action a longitudinal encroachment of the base floodplain?	<u>X</u>	<u></u>
2. Are the risks associated with the implementation of the proposed action significant?	<u>X</u>	<u></u>
3. Will the proposed action support probable incompatible floodplain development?	<u>X</u>	<u></u>
4. Are there any significant impacts on natural and beneficial floodplain values?	<u>X</u>	<u></u>
5. Routine construction procedures are required to minimize impacts on the floodplain. Are there any special mitigation measures necessary to minimize impacts or restore and preserve natural and beneficial floodplain values? If yes, explain.	<u>X</u>	<u></u>
6. Does the proposed action constitute a significant floodplain encroachment as defined in 23 CFR, Section 650.105(q).	<u>X</u>	<u></u>
7. Are Location Hydraulic Studies that document the above answers on file? If not explain.	<u></u>	<u>X</u>

PREPARED BY:

\_\_\_\_\_  
Signature - Dist. Hydraulic Engineer

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature - Dist. Environmental Branch Chief

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature - Dist. Project Engineer

\_\_\_\_\_  
Date

## SUMMARY FLOODPLAIN ENCROACHMENT REPORT

Dist. 8 Co. Sbd Rte. 10 P.M. 10.99  
Project No.: 0C2500 Bridge No.: 54 0378L R S  
Limits: I-10 L.A. County Line to Ford St. in Redlands

Floodplain Description: Etiwanda Creek Floodplain

Zone A

	No	Yes
1. Is the proposed action a longitudinal encroachment of the base floodplain?	<u>X</u>	<u></u>
2. Are the risks associated with the implementation of the proposed action significant?	<u>X</u>	<u></u>
3. Will the proposed action support probable incompatible floodplain development?	<u>X</u>	<u></u>
4. Are there any significant impacts on natural and beneficial floodplain values?	<u>X</u>	<u></u>
5. Routine construction procedures are required to minimize impacts on the floodplain. Are there any special mitigation measures necessary to minimize impacts or restore and preserve natural and beneficial floodplain values? If yes, explain.	<u>X</u>	<u></u>
6. Does the proposed action constitute a significant floodplain encroachment as defined in 23 CFR, Section 650.105(q).	<u>X</u>	<u></u>
7. Are Location Hydraulic Studies that document the above answers on file? If not explain.	<u></u>	<u>X</u>

PREPARED BY:

\_\_\_\_\_  
Signature - Dist. Hydraulic Engineer

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature - Dist. Environmental Branch Chief

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature - Dist. Project Engineer

\_\_\_\_\_  
Date

## SUMMARY FLOODPLAIN ENCROACHMENT REPORT

Dist. 8 Co. Sbd Rte. 10 P.M. 11.64  
Project No.: 0C2500 Bridge No.: 54 0454 L R S  
Limits: I-10 - L.A. County Line to Ford St. in Redlands

Floodplain Description: San Sevaïne Channel crossing under I-10. Q<sub>100</sub> is contained within concrete lined rectangular channel.

### Zone AE

	No	Yes
1. Is the proposed action a longitudinal encroachment of the base floodplain?	<u>X</u>	<u></u>
2. Are the risks associated with the implementation of the proposed action significant?	<u>X</u>	<u></u>
3. Will the proposed action support probable incompatible floodplain development?	<u>X</u>	<u></u>
4. Are there any significant impacts on natural and beneficial floodplain values?	<u>X</u>	<u></u>
5. Routine construction procedures are required to minimize impacts on the floodplain. Are there any special mitigation measures necessary to minimize impacts or restore and preserve natural and beneficial floodplain values? If yes, explain.	<u>X</u>	<u></u>
6. Does the proposed action constitute a significant floodplain encroachment as defined in 23 CFR, Section 650.105(q).	<u>X</u>	<u></u>
7. Are Location Hydraulic Studies that document the above answers on file? If not explain.	<u></u>	<u>X</u>

PREPARED BY:

\_\_\_\_\_  
Signature - Dist. Hydraulic Engineer

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature - Dist. Environmental Branch Chief

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature - Dist. Project Engineer

\_\_\_\_\_  
Date

# SUMMARY FLOODPLAIN ENCROACHMENT REPORT

Dist. 8	Co.	Sbd	Rte. 10	P.M.	14.5
---------	-----	-----	---------	------	------

Project No.:	0C2500	Bridge No.:
--------------	--------	-------------

Limits: I-10 - L.A. County Line to Ford St. in Redlands

Floodplain Description: Shallow Ponding adjacent to WB I-10 Freeway between Cherry and Citrus

No	Yes
----	-----

- |    |  |          |                 |
|----|--|----------|-----------------|
| 1. | Is the proposed action a longitudinal encroachment of the base floodplain?   | <u>X</u> | <u>        </u> |
| 2. | Are the risks associated with the implementation of the proposed action significant?   | <u>X</u> | <u>        </u> |
| 3. | Will the proposed action support probable incompatible floodplain development?   | <u>X</u> | <u>        </u> |
| 4. | Are there any significant impacts on natural and beneficial floodplain values?   | <u>X</u> | <u>        </u> |
| 5. | Routine construction procedures are required to minimize impacts on the floodplain. Are there any special mitigation measures necessary to minimize impacts or restore and preserve natural and beneficial floodplain values? If yes, explain. | <u>X</u> | <u>        </u> |
| 6. | Does the proposed action constitute a significant floodplain encroachment as defined in 23 CFR, Section 650.105(q).  | <u>X</u> | <u>        </u> |
| 7. | Are Location Hydraulic Studies that document the above answers on file? If not explain.  |          | X               |

PREPARED BY:

Signature - Dist. Hydraulic Engineer

Date \_\_\_\_\_

Signature - Dist. Environmental Branch Chief

Date \_\_\_\_\_

Signature - Dist. Project Engineer

Date \_\_\_\_\_

## SUMMARY FLOODPLAIN ENCROACHMENT REPORT

Dist. 8 Co. Sbd Rte. 10 P.M. 22.36

Project No.: 0C2500 Bridge No.:

Limits: I-10 - L.A. County Line to Ford St. in Redlands.

the City of Colton

Floodplain Description: Colton Southwest Storm Drain

Zone A

	No	Yes
1. Is the proposed action a longitudinal encroachment of the base floodplain?	<u>X</u>	<u></u>
2. Are the risks associated with the implementation of the proposed action significant?	<u>X</u>	<u></u>
3. Will the proposed action support probable incompatible floodplain development?	<u>X</u>	<u></u>
4. Are there any significant impacts on natural and beneficial floodplain values?	<u>X</u>	<u></u>
5. Routine construction procedures are required to minimize impacts on the floodplain. Are there any special mitigation measures necessary to minimize impacts or restore and preserve natural and beneficial floodplain values? If yes, explain.	<u>X</u>	<u></u>
6. Does the proposed action constitute a significant floodplain encroachment as defined in 23 CFR, Section 650.105(q).	<u>X</u>	<u></u>
7. Are Location Hydraulic Studies that document the above answers on file? If not explain.	<u></u>	<u>X</u>

PREPARED BY:

Signature - Dist. Hydraulic Engineer

Date

Signature - Dist. Environmental Branch Chief

Date

Signature - Dist. Project Engineer

Date

## SUMMARY FLOODPLAIN ENCROACHMENT REPORT

Dist. 8 Co. Sbd Rte. 10 P.M. 22.9

Project No.: 0C2500 Bridge No.:

Limits: I-10 - L.A. County Line to Ford St. in Redlands

Floodplain Description: 11th Street Storm Drain adjacent to EB roadbed.

	No	Yes
1. Is the proposed action a longitudinal encroachment of the base floodplain?	<u>X</u>	<u></u>
2. Are the risks associated with the implementation of the proposed action significant?	<u>X</u>	<u></u>
3. Will the proposed action support probable incompatible floodplain development?	<u>X</u>	<u></u>
4. Are there any significant impacts on natural and beneficial floodplain values?	<u>X</u>	<u></u>
5. Routine construction procedures are required to minimize impacts on the floodplain. Are there any special mitigation measures necessary to minimize impacts or restore and preserve natural and beneficial floodplain values? If yes, explain.	<u>X</u>	<u></u>
6. Does the proposed action constitute a significant floodplain encroachment as defined in 23 CFR, Section 650.105(q).	<u>X</u>	<u></u>
7. Are Location Hydraulic Studies that document the above answers on file? If not explain.	<u></u>	<u>X</u>

PREPARED BY:

Signature - Dist. Hydraulic Engineer

Date

Signature - Dist. Environmental Branch Chief

Date

Signature - Dist. Project Engineer

Date

## SUMMARY FLOODPLAIN ENCROACHMENT REPORT

Dist. 8 Co. Sbd Rte. 10 P.M. 23.6  
Project No.: 0C2500 Bridge No.: 540830 L R  
Limits: I-10 - L.A. County Line to Ford St. in Redlands  
the City of Colton  
Floodplain Description: Warm (Lytle) Creek Floodplain

	No	Yes
1. Is the proposed action a longitudinal encroachment of the base floodplain?	<u>X</u>	<u></u>
2. Are the risks associated with the implementation of the proposed action significant?	<u>X</u>	<u></u>
3. Will the proposed action support probable incompatible floodplain development?	<u>X</u>	<u></u>
4. Are there any significant impacts on natural and beneficial floodplain values?	<u>X</u>	<u></u>
5. Routine construction procedures are required to minimize impacts on the floodplain. Are there any special mitigation measures necessary to minimize impacts or restore and preserve natural and beneficial floodplain values? If yes, explain.	<u>X</u>	<u></u>
6. Does the proposed action constitute a significant floodplain encroachment as defined in 23 CFR, Section 650.105(q).	<u>X</u>	<u></u>
7. Are Location Hydraulic Studies that document the above answers on file? If not explain.	<u></u>	<u>X</u>

PREPARED BY:

\_\_\_\_\_  
Signature - Dist. Hydraulic Engineer

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature - Dist. Environmental Branch Chief

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature - Dist. Project Engineer

\_\_\_\_\_  
Date

## SUMMARY FLOODPLAIN ENCROACHMENT REPORT

Dist. 8 Co. Sbd Rte. 10 P.M. 23.82  
Project No.: 0C2500 Bridge No.: 54 0292 G R L  
Limits: I-10 - L.A County Line to Ford St. in Redlands

Floodplain Description: Santa Ana River Floodplain

	No	Yes
1. Is the proposed action a longitudinal encroachment of the base floodplain?	<u>X</u>	<u></u>
2. Are the risks associated with the implementation of the proposed action significant?	<u>X</u>	<u></u>
3. Will the proposed action support probable incompatible floodplain development?	<u>X</u>	<u></u>
4. Are there any significant impacts on natural and beneficial floodplain values?	<u>X</u>	<u></u>
5. Routine construction procedures are required to minimize impacts on the floodplain. Are there any special mitigation measures necessary to minimize impacts or restore and preserve natural and beneficial floodplain values? If yes, explain.	<u>X</u>	<u></u>
6. Does the proposed action constitute a significant floodplain encroachment as defined in 23 CFR, Section 650.105(q).	<u>X</u>	<u></u>
7. Are Location Hydraulic Studies that document the above answers on file? If not explain.	<u></u>	<u>X</u>

PREPARED BY:

\_\_\_\_\_  
Signature - Dist. Hydraulic Engineer

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature - Dist. Environmental Branch Chief

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature - Dist. Project Engineer

\_\_\_\_\_  
Date

## SUMMARY FLOODPLAIN ENCROACHMENT REPORT

Dist. 8 Co. Sbd Rte. 10 P.M. 25.46  
Project No.: 0C2500 Bridge No.: 54 0599  
Limits: I-10 - L.A. County Line to Ford St. in Redlands

Floodplain Description: San Timoteo Channel Floodplain

	No	Yes
1. Is the proposed action a longitudinal encroachment of the base floodplain?	<u>X</u>	<u></u>
2. Are the risks associated with the implementation of the proposed action significant?	<u>X</u>	<u></u>
3. Will the proposed action support probable incompatible floodplain development?	<u>X</u>	<u></u>
4. Are there any significant impacts on natural and beneficial floodplain values?	<u>X</u>	<u></u>
5. Routine construction procedures are required to minimize impacts on the floodplain. Are there any special mitigation measures necessary to minimize impacts or restore and preserve natural and beneficial floodplain values? If yes, explain.	<u>X</u>	<u></u>
6. Does the proposed action constitute a significant floodplain encroachment as defined in 23 CFR, Section 650.105(q).	<u>X</u>	<u></u>
7. Are Location Hydraulic Studies that document the above answers on file? If not explain.	<u></u>	<u>X</u>

PREPARED BY:

\_\_\_\_\_  
Signature - Dist. Hydraulic Engineer

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature - Dist. Environmental Branch Chief

\_\_\_\_\_  
Date

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Signature - Dist. Project Engineer

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Date

## SUMMARY FLOODPLAIN ENCROACHMENT REPORT

Dist. 8 Co. Sbd Rte. 10 P.M. 27.64  
Project No.: 0C2500 Bridge No.: 54 0570  
Limits: I-10 - L.A. County Line to Ford St. in Redlands

Floodplain Description: Mission Channel Floodplain

	No	Yes
1. Is the proposed action a longitudinal encroachment of the base floodplain?	<u>X</u>	<u></u>
2. Are the risks associated with the implementation of the proposed action significant?	<u>X</u>	<u></u>
3. Will the proposed action support probable incompatible floodplain development?	<u>X</u>	<u></u>
4. Are there any significant impacts on natural and beneficial floodplain values?	<u>X</u>	<u></u>
5. Routine construction procedures are required to minimize impacts on the floodplain. Are there any special mitigation measures necessary to minimize impacts or restore and preserve natural and beneficial floodplain values? If yes, explain.	<u>X</u>	<u></u>
6. Does the proposed action constitute a significant floodplain encroachment as defined in 23 CFR, Section 650.105(q).	<u>X</u>	<u></u>
7. Are Location Hydraulic Studies that document the above answers on file? If not explain.	<u></u>	<u>X</u>

PREPARED BY:

\_\_\_\_\_  
Signature - Dist. Hydraulic Engineer

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature - Dist. Environmental Branch Chief

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Date

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Signature - Dist. Project Engineer

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Date

## SUMMARY FLOODPLAIN ENCROACHMENT REPORT

Dist. 8 Co. Sbd Rte. 10 P.M. 27.64  
Project No.: 0C2500 Bridge No.: 54 0472 L R  
Limits: I-10 - L.A. County Line to Ford St. in Redlands

Floodplain Description: Zanja Channel Floodplain

	No	Yes
1. Is the proposed action a longitudinal encroachment of the base floodplain?	<u>X</u>	<u></u>
2. Are the risks associated with the implementation of the proposed action significant?	<u>X</u>	<u></u>
3. Will the proposed action support probable incompatible floodplain development?	<u>X</u>	<u></u>
4. Are there any significant impacts on natural and beneficial floodplain values?	<u>X</u>	<u></u>
5. Routine construction procedures are required to minimize impacts on the floodplain. Are there any special mitigation measures necessary to minimize impacts or restore and preserve natural and beneficial floodplain values? If yes, explain.	<u>X</u>	<u></u>
6. Does the proposed action constitute a significant floodplain encroachment as defined in 23 CFR, Section 650.105(q).	<u>X</u>	<u></u>
7. Are Location Hydraulic Studies that document the above answers on file? If not explain.	<u></u>	<u>X</u>

PREPARED BY:

\_\_\_\_\_  
Signature - Dist. Hydraulic Engineer

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Date

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Signature - Dist. Environmental Branch Chief

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Date

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Signature - Dist. Project Engineer

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Date